

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

In re application of: J.A. Lightfoot and K.A. Hughes Attorney Docket No.: UDL1P070

Application No.: New

Examiner: Not Yet Assigned

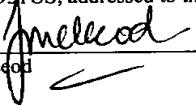
Filed: Herewith

Group: Unknown

Title: IMPROVEMENTS IN AND RELATING  
TO METHODS AND APPARATUS FOR  
INVESTIGATING EMISSIONS

**CERTIFICATE OF EXPRESS MAILING**

I hereby certify that this paper and the documents and/or fees referred to as attached therein are being deposited with the United States Postal Service on March 27, 2002 in an envelope as "Express Mail Post Office to Addressee" service under 37 CFR §1.10, Mailing Label Number EL580402931US, addressed to the Commissioner for Patents, Washington, DC 20231.

  
Jeena McLeod**PETITION TO MAKE SPECIAL FOR NEW APPLICATION**  
**UNDER MPEP §708.02(VIII)**

Commissioner for Patents  
Box PCT  
Attention: DO/EO  
Washington, D.C. 20231

Sir:

Applicant hereby petitions to make this new application, which has not received any examination by the Examiner, special.

All the claims in this case are directed to a single invention.  
 If the Office determines that all the claims presented are not obviously directed to a single invention, Applicant will make an election without traverse as a prerequisite to the grant of special status.  
 If claims \_\_\_\_\_ are found not to be examinable in this case with claim(s) \_\_\_\_\_, Applicant hereby elects claim(s) \_\_\_\_\_ for the prosecution of this case.

A search has been made by:

the inventor  attorney  
 professional searcher  foreign patent office

in the following:

field of search: classes IPC7, subclasses G01T, G21K, G01S  
 publications  
 chemical abstracts  
 foreign patents

- search report by corresponding foreign patent office or at the former International Patent Institute at The Hague, Netherlands.
- There is submitted herewith a copy of the references deemed most closely related to the subject matter encompassed by the claims.
- Form PTO-1449 is attached.
- There is submitted herewith a detailed discussion of the references which discussion particularly points out how the claimed subject matter is distinguishable over the references

If the Commission decides that fees are required to facilitate filing of this paper, the Commissioner is hereby authorized to charge such fees to please charge such fees or credit any overpayment to Deposit Account No. 500388 (Order No. UDL1P070)

Respectfully submitted,  
BEYER WEAVER & THOMAS, LLP



Steve D. Beyer  
Registration No. 31, 234

P.O. Box 778  
Berkeley, CA 94704-0778  
(650) 961-8300

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

In re application of: J.A. Lightfoot and K.A. Hughes Attorney Docket No.: UDL1P070

Application No.: Unassigned

Examiner: Unassigned

Filed: Herewith

Group: Unknown

**Title: IMPROVEMENTS IN AND RELATING  
TO METHODS AND APPARATUS FOR  
INVESTIGATING EMISSIONS**

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Jeena McLeod

**STATEMENT IN SUPPORT OF PETITION TO MAKE SPECIAL UNDER  
MPEP §708.02, Paragraphs V And VIII**

Commissioner for Patents  
Box PCT  
Attention: DO/EO  
Washington, DC 20231

Dear Sir:

**REMARKS**

A Petition to Make Special for the referenced application is attached hereto. Applicants believe that the claims of this application are directed toward an invention which will materially enhance the quality of the environment of mankind by contributing to the restoration of the basic life-sustaining natural elements under MPEP § 708.02, paragraph V. As such, no fee is required for this petition. A statement in support of this assertion follows in paragraph below. Should the Patent Office not agree that the present invention qualifies for special status under paragraph V, applicants hereby request accelerated examination under MPEP § 708.02, paragraph VIII. The appropriate fee for accelerated examination MPEP § 708.02, paragraph VIII may be deducted from applicants' attorneys' deposit account 50-0388 (Order No. UDL1-P070) accompanies this Statement.

All claims of the present application are directed toward a method for detecting radioactive emissions, with a particular emphasis on detecting gamma radiation. The present invention detects and pinpoints radiation sources, particularly sources of gamma radiation, using a detector assembly with moveable shielding. The moveable shield allows readings of emissions rates to be taken from several different directions by moving the shielding, rather than shifting the entire device. By triangulating based upon several different readings, the source of the emissions can be located quickly with a high degree of accuracy.

Such rapid location of emissive materials, as well as the rapid determination of their level of radioactivity will be of great assistance in the cleanup of both temporary nuclear waste dumpsites and decommissioned nuclear reactors. These applications will materially enhance the environment and justify granting the present application special status without a fee.

All claims are directed to a single invention. Claim 1 is the only independent claim presented by this application and it is directed toward a method of investigating radioactive emissions using a detector having a movable shielding component, providing the detector with a variable field of view. The dependent claims provide further detail for how the detector and its movable shield should be used. If the Examiner disagrees that all claims herein are directed to a single invention, applicants hereby agree to make an election without traverse to a group of claims directed to a single invention.

A pre-examination search has been made. A copy of the International Preliminary Examination Report under PCT Article 36 and Rule 70 and the International Search Report accompanies this Petition. Copies of the three references cited therein are also appended hereto.

As stated previously, the present invention detects and pinpoints radiation sources, particularly sources of gamma radiation, using a detector assembly with moveable shielding. The moveable shield allows readings of emissions rates to be taken from several different directions by moving the shielding, rather than shifting the entire device. By triangulating based upon several different readings, the source of the emissions can be located quickly with a high degree of accuracy. EP Patent Application has a shaped radiation detector shield, but the reference nowhere describes or suggests making the radiation shield movable apart from the detector, which in the present invention enables rapid localization of emission sources. FR Patent 2,706,627 suggests a method for focussing gamma radiation. However, it does not suggest the

movable shield used in the present invention. U.S. Patent No. 4,047,147, entitled "Dual Beam Sonar Display System" is in an unrelated field, does not teach using a movable shield even in a sonar system, and does not describe or suggest the present invention's method of using a movable shield to determine the position of emission sources. None of the references anticipates the pending claims and the combination of these references does not make any feature of the present invention as set forth in those claims obvious.

### **CONCLUSION**

Applicants believe that all prerequisites necessary to make the present application special have been met. If the Examiner disagrees, applicants would welcome the opportunity to discuss the matter with the Examiner by telephone conference with their attorney.

Respectfully submitted,  
BEYER WEAVER & THOMAS, LLP



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Reg. No. 31,234

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